Claims in Current Form

U.S. Patent Application No. 09/739,991

1. (Previously Presented) A data structure for analyzing retail transactional data in a computer-implemented data mining system, wherein the data structure is a data model that defines the manner in which said retail transactional data is stored and organized within said data mining system, said data model comprising a basket database table that contains summary information about the retail transactional data, an item database table that contains information about individual items referenced in the retail transactional data, and a department database table that contains aggregate information about the retail transactional data, and the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior; and

wherein the data model is accessed from a relational database managed by a relational database management system.

2. (Cancelled)

3. (Previously Presented) The data structure of claim 1, wherein the cluster analysis groups the retail transactional data into coherent groups according to perceived similarities in the retail transactional data.

4. (Cancelled)

5. (Cancelled)

6. (Original) The data structure of claim 1, wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis.

7. (Original) The data structure of claim 1, wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis.

8. (Previously Presented) The data structure of claim 1, wherein the data model is comprised of one row per transaction in the retail transactional data.

9. (Previously Presented) A method for analyzing retail transactional data in a computer-implemented data mining system, comprising:

generating a data structure in the computer-implemented data mining system, wherein the data structure is a data model that defines the manner in which said retail transactional data is stored and organized within said data mining system, said data model comprising a basket database table that contains summary information about the retail transactional data, an item database table that contains information about individual items referenced in the retail transactional data, and a department database table that contains aggregate information about the retail transactional data; and

mapping the data model to aggregate the transactional data for cluster analysis of shopping behavior; and

wherein the data model is accessed from a relational database managed by a relational database management system.

10. (Cancelled)

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11. (Previously Presented) The method of claim 9, wherein the cluster analysis groups the retail transactional data into coherent groups according to perceived similarities in the retail transactional data.

12. (Cancelled)

13. (Cancelled)

14. (Original) The method of claim 9, wherein the mapping step comprises mapping the data model into a single flat table format to produce a correct level of aggregation for statistical analysis.

15. (Original) The method of claim 9, wherein the mapping step comprises mapping the data model into a database view to produce a correct level of aggregation for statistical analysis.

16. (Previously Presented) The method of claim 9, wherein the data model is comprised of one row per transaction in the retail transactional data.

17. (Previously Presented) An apparatus for analyzing retail transactional data in a computer-implemented data mining system, comprising:

means for generating a data structure in the computer-implemented data mining system, wherein the data structure is a data model that defines the manner in which said retail transactional data is stored and organized within said data mining system, said data model comprising a basket database table that contains summary information about the retail transactional data, an item database table

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that contains information about individual items referenced in the retail transactional data, and a department database table that contains aggregate information about the retail transactional data; and

means for mapping the data model to aggregate the transactional data for cluster analysis of shopping behavior; and

wherein the data model is accessed from a relational database managed by a relational database management system.

18. (Cancelled)

19. (Previously Presented) The apparatus of claim 17, wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the retail transactional data.

20. (Cancelled)

21. (Cancelled)

22. (Original) The apparatus of claim 17, wherein the means for mapping comprises means for mapping the data model into a single flat table format to produce a correct level of aggregation for statistical analysis.

23. (Original) The apparatus of claim 17, wherein the means for mapping comprises means for mapping the data model into a database view to produce a correct level of aggregation for statistical analysis.

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24. (Previously Presented) The apparatus of claim 17, wherein the data model is comprised of one row per transaction in the retail transactional data.

25. (Previously Presented) The data structure of claim 1, wherein the cluster analysis utilizes a Gaussian Mixture Model.

26. (Previously Presented) The method of claim 9, wherein the cluster analysis utilizes a Gaussian Mixture Model.

27. (Previously Presented) The apparatus of claim 17, wherein the cluster analysis utilizes a Gaussian Mixture Model.